REMARKS

The present Amendment amends claims 1, 2, 5, 6, and 8-23 and cancels claims 3, 4 and 7. Therefore, the present application has pending claims 1, 2, 5, 6 and 8-23.

The Examiner objects to the Abstract as not conforming to the requirements under MPEP §608.01(b). The Abstract was amended to conform to the requirements under MPEP §608.01(b). Therefore, this objection is overcome and should be withdrawn.

Claims 1-23 stand rejected under 35 USC §101 as allegedly being directed to non-statutory subject matter. Specifically the Examiner alleges that claims are not directed to a final result that is useful, tangible and concrete. This rejection is traversed for the following reasons. Applicants submit that the claims 1-23 are in fact directed to statutory subject matter. Specifically the claims are each directed to a statutory class of patentable subject matter, namely a machine (storage system) and a process (method implemented in the storage system).

The Examiner's allegation with respect to claims 1-23 is not a test of patentable subject matter as recognized by the courts when such claims clearly identify themselves and recited "real world" type features of a machine (storage system) and a process (method implemented in the storage system). The test as set forth by the Examiner in the Office Action is more appropriate when examining whether claims directed to a computer program recite patentable subject matter. Thus, the claims are clearly directed to patentable subject matter as required under 35 USC §101 and the Examiner has not made a prima facie case that the claims do not recite patentable subject

13

matter. Therefore, Applicants respectfully request the Examiner to reconsider and withdraw this rejection.

Claims 5 and 7 stand rejected under 35 USC §112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regards as their invention. As indicated above, claim 7 was canceled. Therefore, this rejection with respect to claim 7 is rendered moot. Various amendments were made throughout claim 5 to bring it into conformity with the requirements of 35 USC §112, second paragraph. Therefore, this rejection with respect to claim 5 is overcome and should be withdrawn.

Specifically, amendments were made throughout claim 5 to overcome the objections noted by the Examiner in the Office Action.

Claims 1-23 stand rejected under 35 USC §102(e) as being anticipated by Schlieben (U.S. Patent Application Publication No. 2003/0096605). As indicated above, claims 3, 4 and 7 were canceled. Therefore, this rejection with respect to claims 3, 4 and 7 is rendered moot. This rejection with respect to the remaining claims 1, 2, 5, 6 and 8-23 is traversed for the following reasons. Applicants submit that the features of the present invention as now more clearly recited in claims 1, 2, 5, 6 and 8-23 are not taught or suggested by Schlieben whether taken individually or in combination with any of the other references of record. Therefore, Applicants respectfully request the Examiner to reconsider and withdraw this rejection.

Amendments were made to the claims to more clearly describe features of the present invention. Particularly, amendments were made to the claims to more clearly recite that the present invention is directed to a storage

14

device, a computer system including the storage device and a data control method implemented on the storage device.

According to the present invention the storage device includes a plurality of storage mediums for storing data, a plurality of disk drives each including one of the storage mediums for storing data, a disk controller for controlling the disk drives, and means for notifying a first external device of a change in data stored in a specific one of the storage mediums.

Further, according to the present invention the change in data stored in the specific one of the storage mediums is performed under control of a second external device, and both of the external devices are connected to the controller.

The above described features of the present invention now more clearly recited in the claims are not taught or suggested by any of the references of record whether taken individually or in combination with each other. Particularly, the above described features of the present invention now more clearly recited in the claims are not taught or suggested by Schlieben whether taken individually or in combination with any of the other references of record.

Schlieben relates teaches a method and system for controlling the distribution of a proprietary object in telecommunications network. In Schlieben the proprietary object is, for example, a ring tone, a graphic file, or an audio file. Schlieben's system has a Master IT and Network Database (MIND) as illustrated in Fig. 1 as element 137. The MIND 137 as per Schlieben stores network information of network system, and provides database replication. The database replication method (i.e. data duplication

15

method) or interfaces of Schlieben uses prior database technology, for example, commercial databases such as ORACLE. The data replication or duplication of prior database technology as taught by Schlieben is performed on computers mainly not storage devices as in the present invention as recited in the claims.

Schlieben teaches that a central controller may be implemented in order to manipulate the individual computers or databases. The Mind database, as per Schlieben, may reside on various types of storage mediums including magnetic or optical mediums such as a compact disc. It is clear that processes in regard to the MIND database, as per Schlieben, is performed by executing "logic" on computers, not in the storage devices such as this invention as recited in the claims.

According to the present invention as recited in the claims, a disk controller of a storage device in a primary system, which controls disk drives in the storage device in the primary system, notifies data updating to another disk controller of another storage device in a secondary system, and the other disk controller notifies the data updating to the database server in the secondary system, as illustrated in Fig. 1 at steps 104 and 106 and as described on page13, line 7 through page 15, line 11 of the present application.

In more detail according to the present invention, an update log for data duplication is stored on disk drive 7, which is a specific disk drive of the storage device in a primary system on the data originating side. The update log is copied to disk drive 17, a specific disk drive of the storage device in a secondary system on the data duplicating side each time the log is updated.

16

The database server 12 is notified from the disk controller 15 in the secondary system and performs the same application processing as in the data originating side based on the updated log.

By use of the above described features of the present invention as recited in the claims, even without a broadband line between the primary and secondary systems, unique advantages over conventional systems are possible, particularly being that there is no delay on database system for data duplication because it is unnecessary to perform a synchronous communication between the data originating and the data duplicating sides.

Thus, Schlieben fails to teach or suggest that the storage device includes a plurality of storage mediums for storing data, a plurality of disk drives each including one of the storage mediums for storing data, a disk controller for controlling the disk drives, and means for notifying a first external device of a change in data stored in a specific one of the storage mediums as recited in the claims.

Further, Schlieben fails to teach or suggest that the change in data stored in the specific one of the storage mediums is performed under control of a second external device, and both of the external devices are connected to the controller as recited in the claims.

Therefore, Schlieben fails to teach or suggest the features of the present invention as now more clearly recited in the claims. Accordingly, reconsideration and withdrawal of the 35 USC §102(e) rejection of claims 1-23 as being unpatentable over Schlieben is respectfully requested.
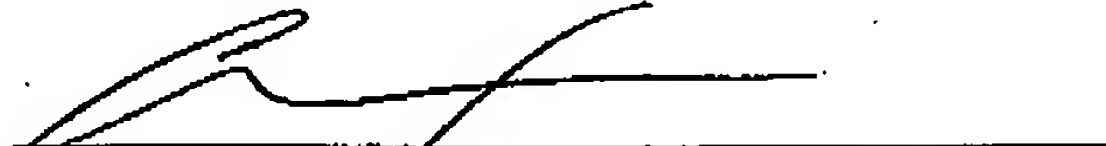
17

The remaining references of record have been studied. Applicants submit that they do not supply any of the deficiencies noted above with respect to the reference utilized in the rejection of claims 1-23.

In view of the foregoing amendments and remarks, applicants submit that claims 1, 2, 5, 6 and 8-23 are in condition for allowance. Accordingly, early allowance of claims 1, 2, 5, 6 and 8-23 is respectfully requested.

To the extent necessary, the applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C., Deposit Account No. 50-1417 (520.42961X00).

Respectfully submitted,

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18